

10,181; Pike's Peak, 13,658; Sandy Hook, 11,302; Sandusky, 10,484. The smallest movements have been, as follows: Augusta, 2,734 miles; Boise City, 1,942; Knoxville, 2,346; Lynchburg, 2,065; Nashville, 1,971; Visalia, 1,833.

Highest Velocities, in miles per hour, have been as follows: Barnegat, E., 60, 21st; Cape Henry, NW., 58, 4th; Cape Lookout, SE., 54, 4th; Cape May, NW., 68, 4th; Dodge City, NE., 60, 3rd; Fort Gibson, S., 50, 14th; Fort Whipple, SE., 60, 4th; Indianola, NE., 96, 16th; Mt. Washington, NW., 102, 23rd; North Platte, SE., 60, 2nd; Pike's Peak, W., 65, 26th; Philadelphia, SE., 60, 4th; St. Marks, SE., 63, 3rd; Washington, NW., 55, 4th.

Local Storms, Tornadoes, &c., as distinct from extended storms, have been reported as follows: 3rd, Louisiana, Mo., severe storm of wind and rain. 7th, Mesquite, Texas, at 3 a. m., a local storm lasting nearly one hour, moving toward ESE., 12 miles wide; houses blown down. 13th, Mare Island, Cal., high wind and thunder-storm. 16th, whirlwind in the bay at Wood's Holl. 30th, Farmington, Utah, very high wind.

VERIFICATIONS.

Indications.—The detailed comparison of the tri-daily weather indications, with the telegraphic reports for each succeeding twenty-four hours, shows a general percentage of omissions of 0.3 per cent., and of verifications of 84.6 per cent. The percentages of verifications for the four elements have been: weather, 91.2; wind direction, 82.4; temperature, 84.8; barometer, 80.1. The percentages of verifications by geographical districts have been: New England, 83.5; Middle Atlantic States, 88.7; South Atlantic States, 86.1; East Gulf States, 89.6; West Gulf States, 83.6; Lower Lake region, 80.8; Upper Lake region, 83.2; Tennessee and Ohio valley, 86.6; Upper Mississippi valley, 83.7; Lower Missouri valley, 80.3. Of the 3,708 predictions that were made, 121, or 3.3 per cent., are considered to have entirely failed; 89, or 2.4 per cent., were one-fourth verified; 555, or 15.0 per cent., were one-half verified; 378, or 10.3 per cent., were three-fourths verified; 2,565, or 69.0 per cent., were wholly verified.

Cautionary Signals.—During the past month 213 Cautionary Signals have been displayed at 47 stations on the coasts of the United States, of which 173, or 81.2 per cent., were reported verified within 100 miles of the station. Thirty-two cases of high winds were reported from these stations, for which signals were displayed too late or not at all.

NAVIGATION

Stages of Water in Rivers.—In the table on Chart No. III, are given the highest and lowest readings on the Signal Service river gauges. It will be seen that the rivers have all been quite low, and the Ohio so low as to impede navigation. The highest stages occurred after the 15th, and up to the close of the month. *Special reports* as follows: Roanoke river, North Carolina, very high on the 6th, 7th and 8th, within 3 feet 9½ inches of the great freshet of 1873. *Muscatine*, Iowa, 31st, river at low-water mark. *Pittsburgh*, river lowest for 30 years. *Keokuk*, river very low; navigation suspended above this point. *Omaha*, the channel of the Missouri has approached the Nebraska shore. *Shreveport*, the upper Red river and tributaries all very high.

TEMPERATURE OF WATER.

In General.—The temperatures of water, as observed in rivers and harbors, are shown on the Chart No. III.

Maximum and Minimum Temperatures.—The highest maxima have been 84° at Galveston and Key West, 83° at Shreveport, 77° at Nashville and 76° at St. Marks and Cairo. The lowest minima have been 44° at Alpena, 45° at Cleveland, Duluth and La Crosse, and 46° at Eastport, Omaha and Yankton.

Ranges of Temperature.—The least ranges have been: 3° at Key West and San Francisco, 4° at Eastport and 5° at Charleston, Jacksonville, Wilmington and St. Paul. The largest have been 25° at Cleveland, 21° at La Crosse and 20° at Alpena, Galveston, Grand Haven, Omaha and St. Louis.

ATMOSPHERIC ELECTRICITY.

Thunder-storms occurred as follows: On the 1st in Iowa, Mich., Mo., Vt., Wis., 2nd, Dakota, Iowa, Kan., Wis., 3rd, Ill., Iowa, Kan., Mich., Mo., Neb., Tex., Wis., 4th, Canada, Wis., 5th, Mass., 7th, Kan., Tex., 8th, Neb., 9th, Ill., Ind., Iowa, Ohio, Wis., 10th, Md., Va., 12th, Ill., Iowa, Neb., Col., Wash. Ty., 13th, Cal., Ill., Iowa, Kan., Mich., Neb., Wis., 15th, Tex., Iowa, Kan., Neb., 16th, Tex., 18th, La., Canada, Ill., Tex., 20th, Ill., Ind., Ky., Md., N. C., Ohio, Pa., W. Va., Mo., Va., 21st, Del., Md., Mass., N. J., Va., Pa., 22nd, Conn., Mass., 24th, Tex., 25th, Iowa, Tex., 26th, Fla., Iowa, Neb., 27th, Iowa, 29th, Canada, Tex., Vt., 30th, La.